

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1 (currently amended). A system comprising a stripper device for stripping volatile compounds from a liquid medium, said stripper device comprising:

a) a shunt to which aqueous liquid medium comprising volatile compounds can be diverted in the form of a side stream to ~~a~~at least one fermentor and/or at least one biogas reactor,

b) ~~pumps, valves and pipes~~means for diverting aqueous liquid medium comprising volatile compounds to the shunt from said at least one fermentor and/or at least one biogas reactor, and

c) an evaporator device comprising a sample of aqueous liquid to which heat obtained from an external heat source can be added, wherein a reduction of the pressure in said evaporator to a first pressure below a predetermined reference pressure generates cold steam, and

d) ~~pumps, valves and pipes~~means for directing the cold steam generated by the evaporator of step c) through said aqueous liquid medium comprising volatile compounds in the shunt of the stripper device at said pressure below a predetermined reference pressure, thereby stripping off volatile compounds and obtaining a cold, volatile compound-comprising steam, ~~and~~

e) a first condensing device, and

f) ~~pumps, valves and pipes~~means for diverting said cold volatile compound-comprising steam at said pressure below the predetermined reference pressure to the first condensing device, and condensing in a first condensing step in said first condensing device said cold volatile compound-comprising steam at said pressure below a predetermined reference pressure, thereby obtaining a first condensed aqueous liquid medium comprising said volatile compounds and vapor not condensed by the first condensing device, ~~and,~~

g) a stripper unit for stripping volatile compounds at said predetermined reference pressure or at a second pressure higher than said predetermined reference pressure,

h) ~~pumps, valves and pipes~~means for diverting said first condensed aqueous liquid medium comprising volatile compounds obtained in step f) to the stripper unit, and stripping off at least part of the volatile compounds from said first condensed aqueous liquid medium comprising volatile compounds by injecting hot aqueous steam at said reference pressure or at the higher second pressure, thereby obtaining a hot volatile compound-comprising steam and aqueous liquid stripped off at least part of said volatile compounds,

i) a second condensing device, and

j) ~~pumps, valves and pipes~~means for diverting said hot volatile compound-comprising steam to a second condensing device, and condensing said hot volatile compound-comprising steam, thereby obtaining a condensate comprising volatile compounds.

2 (currently amended). The system according to claim 1, wherein the stripper device further comprises a further condensing device and ~~pumps, valves and pipes~~means for diverting said vapor not condensed by the first condensing device to the further condensing device for removing at least some of the remaining volatile compounds from said vapor not condensed by the first condensing device, said further condensation involving the step of washing the vapor in a counter current of aqueous liquid, thereby obtaining a combined aqueous liquid fraction comprising the first condensed aqueous liquid medium from the first condensing device and volatile compounds condensed in the further condensing device, and optionally vapor not condensed by the further condensing device.

3 (currently amended). The system according to claim 2 further comprising ~~pumps, valves and pipes~~means for diverting said combined aqueous liquid fraction to the stripper unit.

4 (currently amended). The system according to claim 2, wherein the stripping of volatile compounds in the stripper unit results in the formation of a stripped aqueous liquid medium comprising at the most 200 ppm volatile compounds, ~~such as at the most 100 ppm volatile compounds, for example at the most 50 ppm volatile compounds.~~

5 (currently amended). The system according to claim 4, wherein said second condensing device comprises two heat exchangers for cooling said hot volatile compound-comprising steam in two steps, said cooling generating said condensate comprising volatile compounds in two steps, said second condensing device further generating a heating source, said system further comprising ~~pumps, valves and pipes~~means for

directing said heating source to said evaporator for heating aqueous liquid in said evaporator.

6 (currently amended). The system according to claim 1 further comprising means for diverting ~~aqueous~~ aqueous liquid medium stripped for essentially all of said volatile compounds from said stripper unit to said shunt.

7 (currently amended). The system according to claim 1 wherein the shunt further comprises a pre-degassing unit for removing at least one undesirable gasses affecting ammonia stripping, ~~including undesirable gasses such as methane, carbondioxide and hydrogendisulphide,~~ from the organic material before the remaining part of the organic material is contacted by the cold steam generated by the evaporator.

8-9 (Cancelled)

10 (original). The system according to claim 1, wherein said reference pressure is 1 bar.

11 (original). The system according to claim 10, wherein the first pressure is from about 0.05 to about 0.4 bar.

12. (Cancelled)

13 (original). The system according to claim 10, wherein the second pressure is from about 2 to 3 bar.

14-17 (Cancelled)

18 (currently amended). A mobile unit comprising the system according to claim 1, wherein said mobile unit can be

connected to a fixed installation in the form of a at least one fermentor and/or at least one biogas reactor.

19 (currently amended). A plant for processing organic material comprising solid and liquid parts, said plant comprising the system according to claim 1, said plant further comprising at least one fermentor and/or at least one biogas reactor, wherein said organic material is fermented at mesophilic and/or thermophilic conditions, ~~wherein the stripper device for stripping volatile compounds is connected to the at least one fermentor and/or the at least one biogas reactor, wherein aqueous liquid medium from said at least one fermentor and/or said at least one biogas reactor can be diverted to the shunt through said connection.~~

20-24 (Cancelled)

25 (currently amended). The processing plant according to claim 19 comprising

- i) a lime pressure cooker for hydrolysing the organic material,
- ii) a stripper tank for stripping ammonia from said lime pressure cooked organic material, and
- iii) a said at least one fermentor and/or at least one biogas reactor is for fermenting said lime pressure cooked and ammonia stripped organic material.

26-29 (Cancelled)

30 (currently amended). The plant according to claim 25, wherein the lime pressure cooker comprises a single chamber and a stirrer, an entry port for entering organic material to be lime pressure cooked, and an outlet for diverting the lime pressure cooked organic material to a mixing tank or to a said at least one fermentor and/or at least one biogas reactor connected to said system.

31-48. (Cancelled)

49 (currently amended). The plant according to claim 25, wherein the stripper tank is connected to at least one fermentor and/or at least one biogas reactor producing ~~fermentor connector connected~~ to said system.

50 (previously presented). The plant according to claim 49, wherein the stripper tank is connected to a biogas producing multi-step fermentor system comprising three fermentors. capable of operating at both thermophile conditions and mesophile conditions, wherein each fermentor is connected to said system.

51-57 (Cancelled)

58 (previously presented). The plant according to claim 49 further comprising a decanter centrifuge for separating fermented organic material into a semi-solid fraction comprising 30-40% (w/w) dry matter of which 2 to 10% (w/w) is phosphor, and a liquid fraction comprising reject water.

59 (currently amended). The plant according to claim 58 further comprising a stripper device for stripping ammonia from the reject water, said stripper device comprising

a) an evaporator device comprising a sample of aqueous liquid to which heat obtained from an external heat source can be added, wherein a reduction of the pressure in said evaporator to a first pressure below 1 bar generates cold steam, and

b) ~~pumps, valves and pipes~~means for directing the cold steam generated by the evaporator of step a) through said reject water at a pressure below 1 bar, thereby stripping off ammonia from said reject water and obtaining a cold, ammonia comprising steam, and

c) a first condensing device operated at a pressure below 1 bar, and

d) ~~pumps, valves and pipes~~means for diverting said cold ammonia comprising steam at a pressure below 1 bar to the first condensing device for condensing in a first condensing step in said first condensing device said cold ammonia comprising steam at a pressure below 1 bar, thereby obtaining a first condensed aqueous liquid medium comprising ammonia and vapor not condensed by the first condensing device, and

e) a stripper unit for stripping ammonia at or above a pressure of 1 bar,

f) ~~pumps, valves and pipes~~means for diverting said first condensed aqueous liquid medium comprising ammonia obtained in step d) to the stripper unit, and stripping off at least part of the ammonia by injecting hot steam at or above a pressure of 1 bar, thereby obtaining a hot ammonia comprising steam and aqueous liquid medium stripped off at least part of said ammonia,

g) a second condensing device, and

h) ~~pumps, valves and pipes~~means for diverting said hot ammonia comprising steam to a second condensing device, and condensing said hot volatile compound-comprising steam, thereby obtaining an ammonia condensate.

60-67 (Cancelled)

68 (original). A method for controlling the fermentation of organic material comprising undesirable volatile compounds, said method comprising the steps of

- a) providing a fermentor comprising a liquid medium comprising organic material and a biomass capable of fermenting said organic material,
- b) diverting said liquid medium to a side stream of the fermentor in the form of a shunt,
- c) contacting said liquid medium in said shunt with cold steam at a first pressure below 1 bar, thereby obtaining a cold steam comprising volatile compounds and liquid medium at least partly stripped for volatile compounds,
- d) condensing said cold steam comprising volatile compounds, thereby obtaining a first condensed liquid medium,
- e) injecting hot steam into said first condensed liquid medium at a second pressure of at least about 1 bar,
- f) stripping off at least part of said volatile compounds comprised in said first condensed liquid medium, and obtaining a hot steam of volatile compounds and a condensed liquid medium stripped for essentially all volatile compounds, and
- g) redirecting said liquid medium at least partly stripped for volatile compounds in step c) to said fermentor, and/or returning said condensed liquid medium stripped for essentially all volatile compounds in step f) to said shunt or



to said fermentor, wherein said stripping of volatile compounds and said redirection of said at least partly stripped liquid medium controls the fermentation of said organic material.

69 (currently amended). A method for stripping volatile compounds from a liquid medium, said method comprising the steps of

- a) providing an aqueous liquid medium comprising volatile compounds, and
- b) diverting said liquid medium comprising volatile compounds to a shunt operably linked to a heating source ~~such as an evaporator~~ and a condensing device,
- c) obtaining cold steam in the evaporator by adding heat to a sample of aqueous liquid and reducing the pressure below a predetermined reference pressure, and
- d) directing said cold steam through said liquid medium comprising volatile compounds in the shunt of the stripper device at said pressure below a predetermined reference pressure, ~~preferably 1 bar~~, thereby stripping off volatile compounds and obtaining a cold volatile compound-comprising steam, and
- e) diverting said cold volatile compound-comprising steam at said pressure below a predetermined reference pressure to a first condensing device, and
- f) condensing in a first condensing step said cold volatile compound-comprising steam at said pressure below a predetermined reference pressure, thereby obtaining a first condensed aqueous liquid medium comprising volatile compounds, and
- g) diverting said first condensed aqueous liquid medium comprising volatile compound to a stripper unit, and

h) stripping off the volatile compound from said first condensed aqueous liquid medium comprising volatile compound by heating said first condensed aqueous liquid in said stripper unit at a higher second pressure, preferably a pressure of 1 bar or more, and obtaining a liquid with a reduced concentration of volatile compounds.

70-100 (Cancelled)

101 (new). The system according to claim 7 wherein each undesirable gas is selected from the group consisting of methane, carbon dioxide and hydrogen disulphide.

102 (new). The method according to claim 69, where said predetermined reference pressure is 1 bar.